

## CHAPTER 6 - MEDICATION ADMINISTRATION

### KENTUCKY LAW

#### [KRS 156.502](#) Health Services in School Setting

(1) As used in this section:

(a) Health services means the provision of direct health care, including the administration of medication; the operation, maintenance, or health care through the use of medical equipment; or the administration of clinical procedures. Health services does not include first aid or emergency procedures “(Note-first aid and emergency procedures will be discussed in a separate chapter)

(b) “School employee” means an employee of the public schools of this Commonwealth.

(2) Health services shall be provided, within the health care professional’s current scope of practice in a school setting by:

(a) A physician who is licensed under the provisions of [KRS Chapter 311](#);

(b) An advanced registered nurse practitioner, registered nurse, or licensed practical nurse who is licensed under the provisions of [KRS Chapter 314](#); or

(c) A school employee who is delegated responsibility to perform the health service by a physician, advanced registered nurse practitioner, or registered nurse; and:

1. Has been trained by the delegating physician or delegating nurse for the specific health service, if that health service is one that could be delegated by the physician or nurse within his or her scope of practice; and;

2. Has been approved in writing by the delegating physician or delegating nurse. The approval shall state the school employee consents to perform the health service when the employee does not have the administration of health services in his or her contract or job description as a job responsibility possesses sufficient training and skills, and has demonstrated competency to safely and effectively perform the health service. The school employee shall acknowledge receipt of training by signing the approval form. A copy of the approval form shall be maintained in the students record and personnel file of the school employee. A delegation to a school employee under this paragraph shall be valid only for the current school year.

(3) If no school employee has been trained and delegated responsibility to perform a health service, the school district shall make any necessary arrangement for the provision of the health service to the student in order to prevent a loss of health service from affecting the student’s attendance or program participation. The school district shall continue with this arrangement until appropriate school personnel are delegated the responsibility for health care.

(4) A school employee who has been properly delegated responsibility for performing a medical procedure under Section 2 of this Act shall act as an agent of the school and be granted liability protection under the Federal Paul P. Coverdell Teacher Protection Act of 2001, Public Law 107-110, unless the claimant establishes by clear and convincing evidence that harm was proximately caused by an act or omission of the school employee that constitutes negligence, willful or criminal misconduct, or a conscious, flagrant indifference to the rights and safety of the individual harmed. <sup>(1)</sup>

## DISTRICT RESPONSIBILITIES

Since many students are not in the school setting for more than eight hours, many school-aged children can receive their prescribed medication at home. However, many children who take medications require that medication sometime during the school day. Medication administration is one of the most common health-related activities performed in schools today. Administering medications within the school setting has historically been the responsibility of the school nurse. However, due to the increasing number of students requiring medication administration, the school nurse must increasingly be required to delegate medication administration to unlicensed assistive personnel (UAP).

**Each school district is responsible for adopting their own policy for administering medications to students.** Important issues for school districts to consider regarding the administration of medications include, but are not limited to the following:

- Safe administration of the medication
- Adherence to safe nursing practice, state practice acts and the applicable state laws and regulations (Kentucky Statutes and KBN Advisory Opinions may be found in the Appendix)
- Ongoing monitoring of therapeutic benefits, adverse reactions and any side effects associated with the medication
- Appropriate communication with the student, family, school personnel and health care providers
- Proper documentation
- Use of alternative and homeopathic remedies for self-limiting conditions
- Management of both over-the-counter (OTC) medications and prescription medications
- Self administration of medications by students and monitoring of student's compliance of self-administration of medication
- Need for delegation and supervision of medication administration to unlicensed assistive personnel (UAP) within the school setting
- Confidentiality <sup>(2)</sup>

## GENERAL RECOMMENDATIONS FOR DISTRIBUTION OF MEDICATION TO STUDENTS

- Any medication to be administered to a student must have a signed written request/authorization from the student's parent or legal guardian. (Exhibit 6A) <sup>(3)</sup>
- The written/signed authorization to administer medication must be on file in the student's cumulative health record before any school personnel may administer medication to the student.
- The authorization to administer medication will be valid only for the current school year or until a treatment changes.
- In the event of a treatment change, a new authorization form must be obtained.
- A separate authorization form must be filled out for each medication.
- The Authorization for medication administration shall include:

1. Name of student
2. Name, address, and telephone number of physician
3. Name of medication
4. Dosage and route of administration
5. Time of day for dosage
6. Reason medication is being administered
7. Specify possible reactions or side effects of the medication
8. Parents'/guardian telephone numbers at home, work; and an emergency contact number
9. Release from liability

### **Administration of Prescribed Medication**

Prescribed medication must be sent to the school in the original labeled container and the label shall include:

1. Name and address of the pharmacy
2. Name of the patient
3. Name of the prescribing practitioner
4. Date the prescription was dispensed
5. Expiration date of the medication
6. Name of the medication, dosage and strength of medication
7. Route of administration
8. Frequency of medication <sup>(5)</sup>

### **Administration of Non-prescribed Medication /over the counter (OTC)**

- A completed authorization from the parent/legal guardian must be on file in the student's cumulative health record ([Exhibit 6B](#)). <sup>(4)</sup>
- OTC medication can be given no more than three (3) consecutive days without written orders from a health care provider. (Health provider approval is highly recommended for any OTC use.)
- Medication must be provided by the parent/legal guardian in the original container, which should include recommended dosage and directions for administration.
- An OTC medication shall not be administered beyond its expiration date.

### **Student Self-Medication**

- In certain situations, a written physician's authorization shall allow a student to responsibly carry self-administered medication (i.e. Epi-pen, inhaler, insulin). (KRS 158.834 and 158.836).
- A completed authorization form must be completed by the parent/guardian and physician ([Exhibit 6A](#)) and on file in the school. This authorization must be renewed each school year. <sup>(3)</sup>  
Documentation from the prescribing health provider should include that:
  1. The student is capable of and has received training on administering the prescribed medication;
  2. The name and purpose of the medication;
  3. The prescribed dosage of the medication;
  4. The times at which or circumstances under which the medication may be given;
  5. The period for which the medication is prescribed
- Students may not share any medication with another student.
- Self-administered medications should be documented (as best practice) on the Student's Daily Medication Form ([Exhibit 6C](#)).

- Notify the parent/guardian if the student uses his/her medication inappropriately or more often than prescribed.
- Advise the student's teaching team and other appropriate staff on a need to know basis. <sup>(6)</sup>

### **Medication Safety**

- First dose of any new medication should not be given at school.
- All medications should be brought to the school by a parent/guardian when possible
- Medication transported to and from home by the student must be in a sealed envelope with the student's name on outside and given to the appropriate school personnel (school nurse or designated school personnel).
- Medication may not be administered by school personnel unless it is in its original container, with the prescription label attached <sup>(7)</sup>
- Medication shall only be administered according to the physician's instructions on the prescription label.
- Discrepancies that exist between the instruction on the Authorization Form and prescription label shall require one of the following to resolve the difference:
  1. a new Authorization Form completed by the parent/guardian to correlate with the prescription label or
  2. a new prescription label to correspond with the existing Authorization Form
- Medications shall not be given beyond the date specified on the Authorization Form
- Medication with a lapsed expiration date on the label must not be administered <sup>(6)</sup>

### **Changes in Medication**

A new Authorization for Medication Administration Form must be obtained whenever there is a need to change a medication, dosage, time and/or frequency and a new prescription bottle from the pharmacy indicating the prescription change.

### **Storage and Disposal of Medication**

- All medications should be kept in an appropriately labeled, secure, locked container or cabinet accessible only to the responsible authorized school personnel. Medications requiring refrigeration shall be kept in a separate refrigerator in a supervised area or locked container that can be stored with food in a supervised area.
- For student's receiving medication throughout the school year, it is recommended that no more than a month's supply of medication be stored on school property.
- When a medication is no longer needed, the school should notify the parent/guardian and request that it be picked up by the parent/guardian; or sent home in a sealed envelope with the student.
- For disposal of unused or expired medication not picked up by the parent at the end of the school year: In the presence of another staff person, use the commode for safe disposal. Both parties shall date and sign the student daily medication record form to verify that the medication was destroyed. <sup>(6)</sup>
- Non-flushable items such as inhaler canisters may be placed in a sharps container. Epi-pen may also be disposed of in a sharps container.

### **Documentation of Administration**

- All medication given must be documented on the Student Daily Medication Record Form. ([Exhibit 6C](#))

- **Each school district should develop policies governing medication administration and documentation and record keeping.** At minimum the records should be specific to each student receiving medication and should include parental consent forms, any authorization from the student's provider, and daily medication logs. Medication logs should contain at minimum:
  1. Dose
  2. Date and time of medication administered
  3. Beginning and end dates of medication to be administered
  4. Reason for omission
- Documentation must be done in unalterable ink and should include any significant reactions by the student to the medication administered.
- The person(s) administering the medication must sign each log. Initials are satisfactory as long as the legal full name exists elsewhere on the page. <sup>(8)</sup>
- Record omissions, absence, or refusals immediately. Record what child did or said to explain why medication not given. Notify parents/guardian in writing why medication was not given. If a student does not appear for a medication, confirm the child's presence or absence in school. <sup>(5)</sup>
- Medication log to be filed with the student's Cumulative Health Record at the end of the year. According to [704 KAR 4:020](#) the student's cumulative health record is to be maintained throughout the child's attendance in the school.

#### **Medication Error (Incident)**

- A medication administration error may occur when school personnel giving medication to students:
  1. Gives the wrong medication
  2. Gives medication to the wrong student
  3. Gives the medication at the wrong time
  4. Uses the wrong method of administration
  5. Gives the wrong amount of medication
- **When a medication administration error occurs, follow these guidelines:**
  1. Keep the student in the health room. If the student has already returned to class, have the student return accompanied to the health room
  2. Observe the student's status and document
  3. Identify the incorrect dose or type of medication taken by the student
  4. Notify the principal, supervising school nurse (if medication was given by a non-licensed personnel) and parents of the student and/or health care provider
  5. If unable to contact the health care provider, contact the Poison Control Center for instructions.
    - Give the name and dose of the medication taken in error
    - Give the age and approximate weight of the student
    - Give the name(s) dose(s) and time of last dose of other medication being taken by the student if possible
  6. Follow instructions from the Poison Control Center, if at all possible. If unable to complete their directions, explain the problems to the Poison Control Center to determine if the student should be transported for emergency medical care.

7. Complete a “Medication Administration Incident Report” form ([Exhibit 6D](#)). <sup>(9)</sup> All reports are to be located in a Master File with the location to be determined by the Principal or designee.
8. Errors in recording medications should be marked “void” and initialed and dated.
9. Errors due to under dosage administration:
  - a) Identify student who took the incorrect dosage
  - b) Contact parent/legal guardian and Principal or designee
  - c) If non-licensed personnel gave medication, contact the supervising school nurse. School nurse will contact the health care provider to determine if the remainder of the dose should be omitted or administered
  - d) Complete “Medication Administration Incident Report” form ([Exhibit 6D](#))
  - e) All complete reports are to be located in a Master File with the location to be determined by the Principal or designee. <sup>(10)</sup>

### **Refusal to Administer Medication**

When circumstances arise that school personnel are unable to grant the request from a parent/legal guardian to administer medication to a student, a letter will be sent home with the student explaining the circumstances by which the medication was not administered. ([Exhibit 6E](#)) <sup>(11)</sup> Circumstances may include:

1. Medication was sent to school out of the original container
2. Medication is prescribed twice daily and can be administered before school and after school hours
3. Medication is prescribed three times daily and can be given before school, after school and before bedtime
4. Student has an elevated temperature
5. Student has requested medication everyday for several days
6. No written authorization on file
7. Other unusual circumstances: \_\_\_\_\_  
(must be followed up with supervising school nurse or health care provider)

### **Field Trips and Medication Administration**

If a student is attending a field trip away from school during his/her scheduled medication time, school personnel trained annually in field trip medication administration will be designated to administer the medication while on the field trip.

- The principal’s designee will notify the daily medication administrator designee of a scheduled field trip at least one week in advance.
- The day of the field trip the daily medication administrator designee will prepare the needed medication to be taken on the field trip. Steps of preparation:
  1. Each medication will be placed in a zip-lock bag in the student’s original container which should include the student’s name, name of medication, dosage, time to be given, and route to be administered. If it’s an over-the-counter medication, it should be in the original container in a zip lock bag and should have student’s name written on the container. The dosage, route, and time to administer will be found on the authorization to give medication form.
  2. A copy of the authorization to give prescription and over-the-counter medication form will be made and placed in a zip-lock bag with the medication.

3. Initial the daily medication record (log) and specify PREPARED medication for field trip.
- The employee responsible to administer medication on the field trip will:
    1. Pick up the medication from the daily medication administrator designee before leaving for the field trip.
    2. Keep medication with him/her until time to give to child
    3. Upon returning from the field trip, initial daily medication record (log) and specify ADMINISTERED medication for field trip.
  - If the employee does not administer medication for whatever reason, she/he is responsible to fill out and send a medication disposition letter to the child's parent/guardian that same day and/or contact them by telephone.

**NOTE:** This is an approved time a split/slash box will occur on the medication record (log). <sup>(6)</sup>

#### **Medication for overnight field trip guidelines**

- Need to take a copy of each child's medication log sheet and medication authorization form and/or copies of physician's authorization form for: asthma, diabetes, seizure, g-tube feeding, or EpiPen. Also, if an asthmatic student is self-administering inhaler(s), you will need to take the health related notes.
- Need to sign and log initials each time child is given medication. There is a one (1) hour window to give medications (1/2 hour before or 1/2 hour after the time medication is due). (i.e. –med due at 1200 maybe given anytime between 11:30-12:30)
- Medication must be kept and administered by an employee that has completed the annual medication training.
- If a child does not get a medication, document in log and explain why on the log sheet. Parent/guardian should be notified by phone or in writing.
- Medication must be stored in the original prescription bottle or original over-the-counter container.
- Medication label must match the directions on the medication authorization form and log.
- Upon returning from field trip, sign the ORIGINAL medication log sheet kept at school. Each person must initial the ORIGINAL medication log for days and times medication was administered by them. You may not transcribe someone's initials for him or her.
- If there is an error (i.e. – wrong medication, wrong dosage, allergic reaction), immediately contact the parent, school administrator, supervising school nurse, and call EMS if needed. Upon return to school, the employee must fill out the student's "Medication Administration Incident Report" form.
- [KRS 158.834](#) allows student(s) to carry their asthma medications if their primary care provider has written that the child has been trained on asthma medication self-administration and is responsible enough to administer himself/herself. The child must have parental and physician's authorization form filled out for administration of medication. <sup>(6)</sup>

#### **ALTERNATIVE MEDICINE USE**

*(The following is excerpted from a Position Statement on Use of Alternative Medicine from the National Association of School Nurses)*



Alternative and complementary medicine includes products or practices not currently used, accepted or available in conventional medicine. Alternative medicine is any practice that is available to the public but not integrated into standard medical practice. Complementary medicine implies that the practice could be applied along with conventional medical care. Herbals (also called botanicals, dietary or nutritional supplements) are products that can be purchased without a prescription (over-the-counter). These products have been unregulated by the U.S. Food and Drug Administration (FDA) until recently. Current regulations apply only to product label information.

Currently there are no standardized dosing guidelines, particularly for children's safe use of herbal products. Consumers may believe that a product marketed as "all natural" or "not a drug" is a treatment with no risk of side effects or less costly than a prescription drug. Health care professionals should not administer to children any substance for which safety is not established. At present, herbal products are not fully regulated and may not be sold unless the FDA can prove there is a danger.

Parents may request that school staff administer herbs and other alternative medicines (with or without a physician's statement): 1) in accordance with the school's policy on over-the-counter medicines, or 2) apart from the policy by suggesting that the product is a food and not subject to any restriction. The National Association of School Nurses recommends that school districts have written policies and procedures that focus on student safety and are consistent with state laws, state nursing practice standards, established safe practices, and scientific information.

Requests to administer or permit a student to carry a substance for relief of a condition or symptom or prevention of a health-related concern should be regarded as a medication request. The position of the National Association of School Nurses is that school policies should not permit students to carry nor permit a school nurse or other staff to administer any product that could be considered a drug, including "natural remedies," herbs, vitamins, dietary supplements, homeopathic medicines, or medications from other countries, without the following:

1. A written order from a health care provider authorized to prescribe that includes the condition for which the product is being used
2. A written request from the parent/legal guardian
3. Verification that the product and requested dosage are safe for the student (considering age, body weight, and condition)
4. Reasonable information about therapeutic and untoward effects and interactions

Policies regarding administration or carrying of any medication or product should be applied consistently with all students. Policies should not prohibit parents/legal guardians from administering the product at school themselves. <sup>(12)</sup>

## **GUIDELINES FOR ADMINISTERING MEDICATION**

Five "Rights" of Medication Administration:

1. Right Student-Properly identify student. (Hint: Rather than asking student "Are you Jane Doe?" before administering the medication, ask the student instead to state their name)
2. Right Time-Administer medication at the prescribed time. This can usually be within 30 minutes on either side of the designated time unless otherwise specified by the provider or the pharmacist
3. Right Medication-Administer the correct medication. Check 3 times - see procedure for medication administration below



4. Right Dose-Administer the right amount of medication
5. Right Route-Use the prescribed method of medication administration <sup>(5)</sup>

Follow School District Policy for Administering Medications to Students. This procedure should be preformed with as little interruption as possible to avoid errors:

1. Wash hands. Administration of medication is a clean (not sterile) procedure.
2. Verify authorization. Check the label. Seek help for questions and dose.
3. Gather necessary items.
4. Prepare and give medications in a well-lit area.
5. **Check the label for name, time, medication, dose, and route** when picking up the medication bottle.
6. Prepare the correct dosage of medication without touching medication if possible.
7. **Check the label for name, time, medication, dose, and route** while preparing the correct dose.
8. **Check the label for name, time, medication, dose, and route** before returning the container to the locked cabinet.
9. Do not leave medication unattended or within reach of the student.
10. Identify the student. Ask the student to say his/her name. Nonverbal students may need third party assistance with identification.
11. If the student questions the right medication, stop, and verify the medication against records or with parents.
12. Ask and observe the student for any unusual behaviors or conditions prior to medication administration. If any noted, do not give the medication. Report the behavior immediately to supervisor or school nurse and record.
13. Explain procedure to student.
14. Position the student properly for medication administration.
15. Provide equipment and supplies as needed.
16. Administer the correct dose of medication to the correct student, at the correct time, by the correct route.
17. Observe student placing medication in his/her mouth, when applicable.
18. Record as soon as possible name, time, medication, dose, route, person administering the medication, and any unusual observations.
19. Clean, return, and/or dispose of equipment as necessary.
20. Wash hands. <sup>(6)</sup>

*The following information on medication administration is used with permission from the Texas Public Health Department, The Texas School Health Guidelines:*

### **Procedures for Administering Oral Medications**

Oral bottled medication:

1. Remove bottle cap and hold the cap in one hand and the bottle in the other hand.
2. Pour the prescribed dose into the cap. Do not touch the pill/tablet/capsule.
3. Transfer medication from cap to a clean medicine cup and give to student.
4. Give with a full glass of water unless otherwise indicated. Follow special label instructions (e.g. take with milk).
5. Recap bottle and return it to locked cabinet.
6. If a student is to receive part (i.e.,  $\frac{1}{2}$ ) of a pill as a regular dose, be sure parent or pharmacist cuts the pills if a school nurse is not available to do so.

Oral individually wrapped medications ("blister packs"):

1. Remove or tear off number needed and place package in a medicine cup.
2. Remove and transfer to cup when student takes medication.
3. Follow above steps for oral bottled medication.

Oral Liquid or powders:

1. Shake medication per label instructions.
2. Pour liquid from side of bottle opposite the label (hold label in palm of hand) into graduated medicine cup to avoid dripping medicine on label.
3. Pour medication at eye level and directly in front of eyes in order to get the correct dose.
4. Measure the dosage at the bottom of the disc (meniscus).
5. Wipe off any medication on the outside of the container.
6. Be certain that medication does not cling to cup or spoon to ensure that student received proper dosage.
7. Use calibrated medicine dropper or syringe to measure small amounts of liquid.
8. Hold medicine dropper at right angle to cup to measure drops.
9. With dropper or syringe, squirt medicine to back and sides of the student's mouth in small amounts. Do so slowly, allowing the student to swallow.
10. With nipple: pour medicine into the nipple after it has been measured. Allow the student to suck the medication from the nipple. Follow with a teaspoon of water from the nipple.
11. Pour liquid medications into separate containers unless otherwise ordered.
12. Give cough syrup undiluted and do not follow with water.

### **Problems with oral medication administration:**

1. Refusal of medication:
  - a) Record on medication sheet.
  - b) Report to school nurse, parent, and/or principal.
2. Vomiting after medication administration:
  - a) Record medication and dosage administration time, time of vomiting, and whether or not medication was present in the vomit.
  - b) Report to school nurse, parent, and/or principal.
3. Suggestions for students with difficulty swallowing:
  - a) Position student in an upright position. (Hint: flexing the student's neck, rounding the shoulders, and positioning the student in a slightly forward or flexed position may achieve a relaxed position).

- b) Give one medication at a time with adequate fluids.
- c) Place medication on back of tongue.
- d) Give medication slowly.
- e) Watch for choking. Placing the student in a relaxed position will lessen the chance of this.
- f) Verify that the student swallowed the medication
- g) Give medication with other food or crushed if directed by provider or pharmacist.

**Procedures for administering skin (topical) medications:**

- 1. Gather necessary equipment, such as tongue blade, gauze, tape, cleansing material, cotton-tipped applicator, or gloves.
- 2. Note condition of affected area. If unusual, report before applying medication.
- 3. Cleanse skin gently with soap and water, removing previously applied medication in a thin layer or as ordered.
- 4. Record any changes seen in skin area treated. Notify school nurse, parent, and/or principal of any change.
- 5. Cover with gauze or other skin protector as ordered on label of medication.

**Procedures for administering eye drops and ointment:**

**Use only preparations labeled for ophthalmic use.**

- 1. Gather necessary equipment: cotton gauze, tissue, and gloves.
- 2. Observe affected eye for any unusual condition and report before administering medication.
- 3. If needed, cleanse eye with gauzy square of cotton, wiping once from inside to outside. Use clean cotton ball for each eye.
- 4. Position student with head tilted back and eyes looking up, lying down if possible.
- 5. Open eye to expose conjunctival sac (lower inside lid).
- 6. Approach eye from outside the field of vision. Avoid touching the dropper tip to anything, including eye, to reduce contamination of the medication.
- 7. Hold the dropper approximately one inch from the eye. Drop the medication gently into the corner of the eye, not on the eyeball. Wait 1-5 minutes between instillations if more than one drop is ordered.
- 8. Gently close eye. Ask student to keep eye closed for a few minutes.
- 9. Blot excess medication with a clean cotton ball or tissue.
- 10. For ointment: pull lower lid down, apply ointment along edge of lower eyelid from the nose side of the eyelid to the opposite side. Avoid touching tip of medication container to the eye to avoid contamination of the medication.

**Procedures for administering eardrops:**

- 1. Gather necessary equipment: cotton balls, tissue, and gloves.
- 2. Position student:
  - a. If lying flat on a cot, turn face to opposite side
  - b. If sitting, tilt head sideways until ear is horizontal
- 3. Cleanse entry to ear canal with clean cotton ball as needed.
- 4. Observe affected area for any unusual condition. Report to nurse, parent and/or principal.
- 5. Straighten the ear canal: pull outer ear gently down and back (ages 3 and under) or up and back (children over 3).
- 6. Drop the medication inside the ear canal. Avoid the dropper touching anything, including the ear, to reduce risk of contamination of the medication.

7. Instruct the student to maintain the required position for at least one minute.
8. Gently rub the skin in front of the ear to assist the medication to flow to the inside of the ear.
9. If the other ear is to be treated, repeat the procedure after 1 minute.
10. Loosely place a cotton ball in the ear as ordered.

**Procedures for administering rectal medications (suppositories):**

1. Place student in side-lying or prone position (on stomach).
2. Lubricate suppository with water-soluble gel (i.e., K-Y-Jelly).
3. Using a finger cot or glove, gently insert the suppository into the rectum.
4. Do not insert finger more than ½ inch.
5. Hold buttocks together for 5-10 minutes. This will help to prevent quick expulsion of the medication, enhancing absorption.
6. Maintain privacy at all times for these students especially!

**Procedures for administering enzyme replacement therapy:**

(Used with student with cystic fibrosis to provide pancreatic enzymes).

1. Enzymes should be given **prior** to a meal or snack.
2. Microspheres or microtablets **should not** be crushed or chewed.
3. For infants and small children, the capsules should be broken open and mixed with a lower **ph** food, such as applesauce, (these enzymes should dissolve in the higher ph environment of the intestines, they are coated with an enteric coating that prevents the enzyme from being dissolved until it reaches the intestine. Crushing or chewing may disrupt the coating, risking improper absorption).

**Procedures for administering aerosol/nebulizer therapy:**

1. Gather equipment and place on clean surface.
2. Wash your hands.
3. Connect the small tubing to the air outlet and to the nebulizer cup.
4. Put the medications in the medication cup. (Include dosages)
5. Replace top on cup and connect the mask or mouthpiece.
6. Position child in a sitting position.
7. Turn machine on.
8. Have child take slow breaths.
9. Observe for side effects.
10. Stop the treatment when mist is no longer seen.
11. Encourage child to cough.
12. Take equipment apart.
13. Clean cups, tops, masks, mouthpieces, syringes, and medication cup with warm, soapy water.
14. Do not wash tubing. Wipe off outside with alcohol.
15. Rinse each piece in running tap water.
16. Allow to air dry completely.
17. Put equipment pieces together and place in plastic bag. <sup>(4)</sup>

## **Procedures for Use of a Metered Dose Inhaler (MDI) with a Spacer:**

### **(Areochamber, Optichamber)**

1. Remove the caps from both the inhaler and spacer. Look inside the Spacer to check that it is empty and clean.
2. Shake the inhaler 4 to 5 times and then place the mouthpiece of the inhaler into the soft rubber ring at the open end of the spacer. (Some inhalers may come with a spacer attached.) Take one breath in and one breath out.
3. Place the spacer mouthpiece between the lips.
4. Press down on the inhaler canister one time to release one puff of the medicine into the spacer. Then breathe in slowly and deeply.
5. Hold your breath while you slowly count to 10.
6. Take the mouthpiece out of your mouth and breathe out slowly.
7. Wait 1 minute between puffs. Repeat steps 2 to 5 for second puff of medicine.

### **Procedure for Use of Metered Dose Inhaler (MDI) with a Spacer and Mask**

1. Remove the caps from the inhaler and spacer. Look inside the spacer to make sure it is empty and clean. Shake the inhaler 4 to 5 times.
2. Insert the mouthpiece of the inhaler into the soft rubber ring at the end of the spacer.
3. Place the mask gently over the child's face so that the mouth and nose are covered. Be certain that there is a good seal. The child may breathe in and out comfortably while the mask is held in place.
4. Press down on the inhaler canister to release one puff of the medicine into the spacer. Keep the mask on the child's face and watch him/her take 6 breaths in and out.
5. Wait 1 minute between puffs, then shake the spacer and inhaler. Repeat steps 3 and 4 again for second puff of medicine.

### **Procedure for Use of The InspirEase (Spacer):**

1. Connect the mouthpiece to the bag by lining up the locking tabs on the mouthpiece with the opening on the bag. Push in gently and twist to lock. Then gently open the bag to its full size.
2. Remove the medicine canister from the plastic cover. Shake the canister 4 to 5 times. Put the canister into the top of the mouthpiece.
3. Put the mouthpiece in mouth and close lips tightly around it. Press down on the canister to release the first puff of medicine into the bag.
4. Breathe in slowly and deeply. If you hear a whistling sound, you are breathing in too quickly and need to slow down. Keep breathing in until the bag collapses all the way. Hold breath while counting to 10 slowly. Then breathe out slowly into the bag. Keep the mouthpiece in mouth and then take another slow, deep breath. Hold breath while counting to 10 slowly.
5. Take the mouthpiece out of the mouth and then breathe out.
6. Wait 1 minute between puffs. Repeat steps 2 to 5 for second puff of medicine.
7. Do not wash/clean the bag. Replace the bags once a month. Clean mouthpiece as per manufacturer's instructions. <sup>(13)</sup>

*The following information is used with permission from the Texas Public Health Department, Texas School Health Guidelines:*

## **PSYCHOTROPIC MEDICATIONS IN SCHOOLS**

School nurses and other personnel administering medication may need to administer prescribed psychotropic drugs to students in schools. The majority of disorders for which a student may be treated with psychotropic or psychoactive medications are disorders for which behavioral or psychotherapy is an integral part of the treatment.

The most common disorders for which nurses might encounter a prescribed psychotropic medication are: depression, attention deficit-hyperactivity disorder (ADHD), anxiety, bipolar disorder (manic-depression), and phobias. It is vital that school nurses and other personnel be familiar with these disorders and their treatment because, like other medical conditions, treatment of psychiatric and psychological disorders “is essential...so that (students) can be free to develop necessary academic and social skills”.

The following is a brief review of the psychotropic medications that schools and nurses will most likely encounter. The use of these drugs is increasing in children and adolescents. It should be noted, however, that pediatric use of many of these medications is not yet specifically approved by the Food and Drug Administration (FDA). Such approval requires demonstrated safety and efficacy, and studies of long-term use of these medications by children do not yet exist. This means that important clinical information, such as the kinds of side effects most likely to occur, is being extrapolated from studies of adult use. Children and adolescents may experience a medication differently from adults. Nurses and school personnel who administer and monitor these medications should have regular contact with the child's psychiatrist or prescribing provider in order to be more fully aware of what they should expect (in terms of effect, behavior, etc.). This is especially important since many of these drugs are not “approved” to be used either in children or for the disorder for which they are being prescribed (e.g., antihistamines for ADHD, antidepressants for anxiety, or antipsychotics for aggressive behavior).

### **Antidepressants (Depression)**

The newest class of anti-depressants are called selective serotonin reuptake inhibitors, usually referred to as SSRIs. Commonly prescribed brand names include Prozac (fluoxetine), Paxil (paroxetine), and Zoloft (sertraline). These medications act in the brain on a chemical messenger called serotonin. A decreased amount of this neurotransmitter in the bloodstream is believed to be one cause of depression; these medications regulate its “reuptake” by the brain, allowing for greater amounts in the bloodstream. These medications may not have a noticeable effect on mood for the first six weeks after beginning administration. However, changes in brain chemistry begin after the first dose. Users of SSRI's sometimes report feeling slightly nauseated or jittery with initial use; these symptoms usually resolve in a few weeks to a few months. Chronic side effects, however, are often an indication that a different drug is in order. A medication change will usually be to a different SSRI, since both the efficacy and the side effects can vary widely among users. Older antidepressants fall into one of two classes-tricyclics (TCAs) (i.e., Elavil) and monoamine oxidase inhibitors (MAOIs) (i.e. Phenelzine). These drugs also act to regulate the availability of neurotransmitters thought to affect mood-the monoamines, serotonin and norepinephrine. While SSRIs work primarily on regulating only serotonin, TCAs and MAOIs act on both serotonin and norepinephrine simultaneously. This dual action can mean a better antidepressant effect for the patient. However, the majority of these medications have dietary restrictions or side effects that make them difficult to tolerate. Users of MAOIs must avoid foods containing tryptophan (turkey, chocolate, warm milk) and tyramine (yeast, cheese, ripe fruit). Side effects can include GI symptoms, palpitations, and drowsiness. TCA side effects include extrapyramidal symptoms risk and a dry mouth.

### **Antianxiety Medications (Anxiety, Phobias)**

Many health care providers prescribe **antidepressant** medications for anxiety disorders. However, these are specific medications available for anxiety. Anxiolytics, including benzodiazepines (valium, or Zanax), are high-potency, and relieve symptoms quickly and have few side effects other than drowsiness. The biggest risk from this class of drug is developing tolerance, which can lead to dependence or a need for progressively higher dosages. Because of this, they tend to be used for short periods of time. In the case of panic disorder they can be prescribed for six to twelve months. Withdrawal symptoms can occur after any length of usage. Other anxiolytics include azipirones (Buspar), which do not have the tolerance problems of the benzodiazepines, but can take several weeks to take effect. Side effects include dizziness, headaches, and nausea.

Beta-blockers (such as propanolol) have also been used to treat anxiety, particularly social phobia. They may be used only if they are needed in particularly feared situations (such as public speaking) in order to prevent symptoms of nervousness (palpitations, shaking hands, etc).

### **Mood Stabilizers (Bipolar Disorder)**

Lithium carbonate is naturally occurring salt that has been used successfully for decades to calm mania and prevent mood cycling. It is most commonly prescribed for a student with bipolar disorder. Most adults with bipolar disorder do very well, but this medication is not as useful with children. The most common side effect is a dry mouth and increased thirst, due to its salt properties.

### **Anticonvulsants**

Depakote (divalproex sodium, valproic acid) is prescribed for children whose disorder includes rapid mood cycling. Tegretol (carbamazepine) has anti-aggressive properties and is therefore useful in treating frequent rage attacks. Side effects to these drugs can include drowsiness/sedation, weight gain, and GI symptoms. New anticonvulsants being used with children include: Neurontin (gabapentin), Lamictal (lamotrigine), Topamax (topiramate), and Gabitril (tiagabine). Of these, Gabitril is the only one the FDA approval specifically for adolescents and is also being used frequently in children.

### **Stimulants (ADHD)**

Cerebral stimulants, used for children with attention deficit hyperactivity disorder (ADHD), are usually considered quite safe. These drugs include Ritalin (methylphenidate), Cylert (pemoline), and Dexedrine (dextroamphetamine). These medications seldom make children “high” or jittery, nor are the sedatives. Instead, stimulants help children control their hyperactivity, inattention, and other behaviors. Side effects include nervousness, insomnia, palpitations, and anorexia.

Different providers use the medications in slightly different ways. Cylert is a long acting medication with a duration of 5 – 10 hours. Ritalin and Dexedrine are short-term medications with a duration of 3 – 4 hours, although longer-term preparations are available that can last through the school day. The short-term dose is often more practical for children who need medication only during the school day or for special situations, like attending church or a prom or studying for an important exam. The sustained-release dosage frees the child from the inconvenience or embarrassment of going to the office or school nurse every day for a pill. The health care provider can help decide which preparation to use and whether a child needs to take the medicine during school hours only or also on evening and weekends.



Nine out of ten children improve on one of the three stimulant drugs. So if one does not produce the desired effect, then others should be tried. Usually a medication is used on a trial basis for at least a week before the decision to continue or change to another drug is made. Sometimes, changing the dosage of the medication is enough to produce the desired effects.

Other types of medication may be used to treat ADHD if the stimulants are ineffective or the side effects are too uncomfortable for the child or parent. Children with ADHD may exhibit a comorbidity disorder, often depression or anxiety. Some medications may treat both disorders or it may be necessary to give a medication specific to each disorder. Antidepressants and other medications may be used to help control accompanying depression and anxiety. In some cases, antihistamines may be tried. Clonidine, a medication frequently used to treat hypertension in adults, may be effective in children with both ADHD and Tourette's Syndrome. Although stimulants tend to be more effective, Clonidine may be tried when stimulants are ineffective or cause too many side effects. Clonidine can be administered either by pill or by skin patch; possible side effects include drowsiness/sedation, dry mouth, and/or constipation.

As with any medication used in schools, psychotropic drugs should be administered only with written parental request and only from the original and properly labeled container. Changes made to the student's treatment should be discussed with the school nurse.

### **Antipsychotic Medication**

Antipsychotic medications can be helpful in controlling psychotic symptoms (delusions, hallucinations) or disorganized thinking. These medications may also help muscle twitches ("tics") or verbal outbursts as seen in Tourette's Syndrome. They are occasionally used to treat severe anxiety and may help reduce very aggressive behavior. Examples of traditional antipsychotic medications include: Chlorpromazine (Thorazine), Thioridazine (Mellaril), Fluphenazine (Prolixin), Trifluoperazine (Stelazine), Thiothixene (Navane) and Haloperidol (Haldol). Newer antipsychotic medications include: Clozapine (Clozaril), Risperidone (Risperdal), Quetiapine (Seroquel), Olanzapine (Zyprexa), and Ziprasidone (Zeldox) <sup>(4)</sup>

### **EMERGENCY MEDICATIONS**

The Kentucky Board of Nursing in Advisory Statement: AOS #87-15 Supervision and Delegation, p.4 footnote 2 states: "For intervention in life-threatening situation, a registered nurse may teach and delegate to non-nurse school employees the preparation and administration of injectable glucagons, epinephrine hydrochloride (using an administration system such as "Epi-Pen") and diazepam suppository. The medications should be given according to written established policies and procedures of the school system." <sup>(14)</sup>

Students and faculty/staff in Kentucky schools may have or may develop life-threatening allergies when exposed to allergens, so schools and districts must be prepared to administer emergency medications to prevent the development of **anaphylaxis** (a severe allergic reaction). Allergic reactions may range from mild to severe (anaphylaxis). Anaphylaxis refers to signs and symptoms that occur as a severe reaction to allergies. These symptoms may include: difficulty breathing and/or swallowing and a tightening or closing of the throat.

The most common allergies are related to: honey bee, wasp, yellow jacket, and hornet stings; legumes (i.e. beans, peas or peanuts); and latex or chemical irritants. Students with Spinal Bifida should be considered at high risk of having latex allergy. <sup>(4)</sup> Children with asthma or other chronic respiratory disorders are at a higher risk of developing anaphylaxis. Anaphylaxis requires prompt medical intervention with an injection of epinephrine (Epi-pen), followed by transport to the nearest emergency room.

## Emergency Injectable Epinephrine (Epi Pens)

- Identify students at risk for anaphylaxis and allergic reaction. Once a student with potential life-threatening allergies is identified, school personnel must obtain a Physician's Authorization Form on file. This form is only valid for the current school year and must be renewed annually. Each school is responsible to develop and implement an emergency procedures plan. <sup>(1)</sup> Chapter 8 of this manual, Emergency Health Services, will discuss emergency health services in more detail. The following is a guideline in developing a school policy/procedure for the use of injectable epinephrine in the school setting.
- Have emergency epinephrine (EpiPens) available. Kits should be available on school grounds and in designated areas, including field trips, in order to increase access by staff to the medication in an emergency situation. All school personnel should be aware of their location and trained in how to use them. Note: Some students may be authorized by their healthcare provider to carry and self-administer epinephrine, but school personnel should be aware that the nature of the severe allergic reaction may incapacitate the affected student. Therefore, staff must be prepared to administer the epinephrine. See KRS 158.832 to KRS 158.836 for 2004 changes in self-administration laws for students at risk for anaphylaxis.
- Expiration dates on emergency epinephrine kits should be checked regularly. Epinephrine is available by prescription only.
- Administer emergency epinephrine (EpiPen) according to product insert instructions ([Exhibit 6F](#))
- Call 911 (or local emergency response team) immediately. \*\* Paramedics should always be called if EpiPen is given \*\* The effect of an EpiPen injection only lasts 20-30 minutes.
- Contact parents or emergency contact person.
- Transport affected and treated student to emergency services as soon as possible. A Registered Nurse or EMS personnel experienced and/or trained in how to handle allergic or anaphylactic emergencies should accompany the student to emergency services, as additional treatment with epinephrine is occasionally necessary. <sup>(4)</sup>

## Glucagon

Glucagon is used to raise the blood sugar when a child is unable to take liquid or food by mouth because of severe sleepiness, unconsciousness, or seizure activity due to low blood sugar levels. Glucagon must be injected with a syringe into the skin, like insulin.

Use of glucagons should be part of a child's emergency action health care plan and be supplied (glucagons kit) to the school by the family with accompanying physician order. Glucagon may be stored at room temperature (under 90 degrees) and stored in an area where all school personnel will be able to locate and access it.

The glucagon syringe is marked with only 2 dosages 0.5 mg and 1.0 mg. The recommended dose of glucagons to inject is:

- 0.5 mg for a child 50 pounds or under
- 1.0 mg for a child over 50 pounds <sup>(17)</sup>

Directions for preparation of Glucagon may be found in [Exhibit 6G](#). <sup>(16)</sup>

### **Diastat Administration**

Diastat is a formulation of diazepam specifically designed for rectal administration to control prolonged seizures and bouts of increased seizure activity (clusters). The medication is available by prescription only and requires a physician's authorization for administration. Guidelines for Diastat Administration may be found on [Exhibit 6H](#). <sup>(6)</sup>

## **DIABETIC MEDICATION (TYPE I AND II) IN SCHOOLS**

Note: For a more in-depth review of diabetes, its management and possible complication, please refer to Chapter 7, Special Health Care Needs.

Diabetes is a disorder that affects the production of insulin by the pancreas. Insulin is necessary for the breakdown of sugars and carbohydrates in the bloodstream. School personnel must have an understanding of diabetes and its management in order to assist the student in maintaining appropriate blood glucose levels and decreasing the risks for diabetic complications.

Type I Diabetes, previously called juvenile or insulin-dependent diabetes, is diagnosed in about 1 in every 400 to 500 school-aged children each year. The child with Type I Diabetes will require daily insulin administration either by injection or insulin pump. Sometimes the child will require additional insulin injections at school depending on the blood glucose levels. Type II Diabetes, formerly known as adult-onset or non-insulin dependent diabetes, is more commonly found in adults, however, there are instances when a school-age child has been diagnosed with Type II Diabetes. The child with Type II Diabetes will usually be managed with diet, exercise and oral medications.

### **Administration of Insulin**

According to [KRS 156.502](#), Section 2, school health services should be provided within the registered nurse or licensed practical nurse current scope or practice and who is licensed under the provisions of [KRS Chapter 314](#). [KRS Chapter 314](#) authorizes the Kentucky Board of Nursing (KBN) to regulate nurses, and nursing education and practice, to promulgate administrative regulations, and issue advisory opinions on nursing practice in order to assure safe and effective nursing care is provided by nurses to the public.

KBN Advisory Opinion Statement AOS #87-15, Supervision and Delegation, p.4, 5(b) states that unless for the intervention in a life-threatening situation, the administration of medication via any injectable route should not be delegated to unlicensed personnel.

### **Types of Insulin**

There are several types of insulin. Each type of insulin will vary in the onset and duration of action. Most students will have a schedule that includes both short and intermediate-acting insulin, taken approximately 30 minutes before breakfast and the evening meal. If the blood glucose level is high four hours after the morning injection, the student may require an additional dose of short-acting insulin (regular insulin) while attending school. (A student with an insulin pump may require a bolus of insulin if the blood glucose level is high.) Student responsibility for insulin self-injection should occur when the child's developmental level indicates that this is an appropriate goal, and agreed upon by the parent's, the child, and the health care provider.

### **Insulin Administration Guidelines:**

- Always inspect the insulin, checking the expiration date on label. Humalog and Regular insulins are clear, others are cloudy. Long- and intermediate-acting insulins must be gently mixed by rolling the vial between the palms. Do not use insulin that appears “clumpy” or that is not uniform in consistency.
- Injection sites may include: abdomen, thighs, buttocks, or arms. Sites should be rotated in order to avoid tissue damage, which results in the poor absorption of insulin.
- Keep insulin refrigerated. Un-refrigerated insulin should be kept as cool as possible. Date the insulin when it is first opened and discard 30 days after opening.
- Do not let insulin freeze. If it becomes frozen, discard immediately.
- Insulin may be carried in a fanny pack or backpack with an ice pack, as long as it is positioned so it does not freeze or get too warm.
- Pre-filled insulin pens should be stored in a refrigerator. Insulin pens with cartridges are not refrigerated, although the unused cartridges are refrigerated. The time period of use for an insulin pen may vary from manufacturer to manufacturer and needs to be noted by the school nurse/employee.
- Students who wear an insulin pump should keep an extra set of tubing and extra batteries in the nurse or principal’s office.
- Syringes and needles should be kept in a locked cupboard.
- Disposal of syringes and needles should be in compliance with Occupational Safety and Health Administration (OSHA) guidelines. <sup>(4)</sup>

### **Insulin Pumps**

Insulin pumps are computerized devices, about the size of a beeper or pager, which can be worn on the belt or in the pocket. The pump delivers a steady, measured dose of insulin through a flexible plastic tube (cannula) with a small needle that is inserted through the skin at the infusion site (abdomen, thigh, arm or buttocks). The infusion set is kept in place for two or three days and then changed to a new location (usually done at home before coming to school). Insulin pumps may be worn during most athletic activities.

The insulin pump delivers the insulin in precise amounts at pre-programmed times. Pumps deliver insulin in two ways:

1. Basal: small, hourly dose that is pre programmed
2. Bolus: given to cover food or cover high blood sugar

The pump allows for more flexibility in food choices and meal timing. The user must still monitor blood sugars. The user must be willing to learn how to make adjustments in insulin, food and exercise in response to the blood sugar results. A plan to address troubleshooting the insulin pump for high or low blood sugars must be developed by the parents, the healthcare provider and the school. When symptoms of high or low blood sugar develop it is important to test the blood glucose level and report as outlined in the student’s Individual Health Plan. <sup>(17)</sup>

## DELEGATION OF MEDICATION ADMINISTRATION TO NON-NURSING STAFF

[KRS 156.502](#) (2) (c):

A school employee who is delegated responsibility to perform the health service by a physician, advanced registered nurse practitioner, or registered nurse; and

1. Has been trained by the delegating physician or delegating nurse for the specific health service, if that health service is one that could be delegated by the physician or nurse within his or her scope of practice; and
2. Has been approved in writing by the delegating physician or delegating nurse. The approval shall state that the school employee consents to perform the health service when the employee does not have the administration of health services in his or her contract or job description as a job responsibility possesses sufficient training and skills, and has demonstrated competency to safely and effectively perform the health service. The school employee shall acknowledge receipt of training by signing the approval form. A copy of the approval form shall be maintained in the student's cumulative health record and the personnel file of the school employee. A delegation to the school employee under this paragraph shall be valid only for the current school year.

Training of district personnel and monitoring of their performance in implementing health care procedures must be provided by a licensed health care professional (as allowed within their scope of practice) or districts may contract for the training through a home health agency, hospital or other health care facility. <sup>(14)</sup> A Summary Guideline on Medication Procedures and Delineation of Roles and Responsibilities is included. (Exhibit 6I) <sup>(5)</sup>

School district specific policies and procedures on orientation and training of non-nursing staff should include the following guidelines:

- General Recommendations for Distribution of Medication to Students
- Administration of Prescribed Medication
- Administration of Non-Prescribed Medication (over –the-counter)
- Student Self-Medication
- Medication Safety
- Changes in Medication
- Storage of Medication
- Documentation of Administration of Medication
- Medication Error Reporting
- Refusal to Administer Medication
- Guidelines for Field Trip Medication Administration
- Procedures for Administering Medication
- Principles of Medication Administration for Non-Nursing Staff

## PRINCIPLES OF MEDICATION ADMINISTRATION FOR NON-LICENSED SCHOOL PERSONNEL

Exhibit 6I has been included as a guide to determining delineation of roles in medication administration. Also to be kept in mind is the KBN Advisory Opinion Statement on Delegation of Nursing services to unlicensed school personnel (AOS #15) included in the Appendix.

Copies of the “Training Guidelines” used by Jefferson County Public Schools Health Services have been included, with permission, at the end of this chapter as an example that school districts may use for the development of their own policies and procedures in training non-licensed school personnel.

(Exhibit 6J) <sup>(6)</sup>

## REFERENCES CHAPTER 6

- (1) [KRS 156.502](#) Health services in school setting
- (2) National Association of School Nurses (NASN) “Position Statement: Medication Administration In The School Setting” (online) available @ <http://www.nasn.org/positions/medication.htm>
- (3) Madison County Department of Health (8/02) “Permission Form for Prescribed Medication”
- (4) Texas Department of Health (2001), The Texas Guide to School Health Programs, Chapter 5, “Medication Administration
- (5) Madison County Department of Health (7/02) “Authorization/Parental Consent For Administering Over-The-Counter Medication”
- (6) Jefferson County Public Schools, School Health Services Manual (2003)
- (7) [KRS 218A.210](#) Controlled substances
- (8) Texas Department of Health (2001). The Texas Guide to School Health Program, pp 260-261, Exhibit 9
- (9) Madison County Department of Health, “Medication Administration Incident Report”
- (10) Maryland Department of Health and Mental Hygiene “Guidelines for Inservicing Non-Medical Personnel on Medication Procedures” (online) available @: <http://www.dhmd.state.md.us>
- (11) Madison County Department of Health “Refusal to Administer Medication” Form
- (12) National Association of School Nurses (NASN) (2003) “Position Statement: Alternative Medicine Use in School Setting” (online) available @: <http://www.nasn.org/positions/altermedi.htm>
- (13) American Lung Association of Pennsylvania, (2000) Attack Asthma
- (14) Kentucky Board of Nursing, Advisory Opinion Statement #AOS 87-15: Roles of Nurses in Supervision and Delegation of Nursing Acts to Unlicensed Personnel
- (15) Zaiger, D.S. (2000) School Nursing Practice, An Orientation Manual, 2<sup>nd</sup> Edition, Ch. III-17
- (16) Madison County Department of Health “Emerging Action Plans”
- (17) New York State Department of Health (2002) Children with Diabetes, A Resource Guide for Schools



## **CHAPTER 6 - EXHIBITS**